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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,547	08/27/2003	Messay Amerga	020683	7595

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EXAMINER	
AGHDAM, FRESHTEH N	
ART UNIT	**PAPER NUMBER**
2611	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/650,547	AMERGA ET AL.	
	Examiner	Art Unit	
	Freshteh N. Aghdam	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 1/19/2006 have been fully considered but they are not persuasive.

Applicant's Arguments: On page 9, regarding claims 1, 16, 20, and 21, applicant argues that the claimed invention is not taught or suggested by Aikawa "Nowhere does Aikawa teach of storing offsets or of comparing a stored offset with a search result, or removing a corresponding search result from a plurality of search results when the search result is within a predetermined threshold of the stored offset". On page 11, regarding claims 2 and 17, applicant requests that the examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding per 37 CFR 1.104(d)(2). On the same page, regarding claim 13, applicant argues that the claimed invention is not taught or suggested by Oh "the predetermined threshold is variable increasing with an increase in the time lapsed since the associated offset was determined".

Examiner Response: Regarding claims 1, 16, 20, and 21, Aikawa teaches a cell search controller that correlates a received signal with a synchronization sequence to produce a first plurality of search results, each search result comprising at least one of an energy indicator (power or correlation value) or an offset (chip); and a processor

(Fig. 4, means 24) for comparing the previously known stored offset or energy indicator (i.e. preset threshold) with the offset of a search result of the first plurality of search results and removing the corresponding search result from the first plurality of search results when the search result offset is within a predetermined threshold of the stored offset (Par. 52-53, 69, and 72). Regarding claims 2 and 17, Aikawa teaches a plurality of scrambling code identifiers wherein different scrambling code identifiers correspond to different cells and are associated with offsets (chips) and the stored offsets (threshold) selected therefrom (Fig. 5; Par. 35 and 53). Aikawa does not expressly teach storing scrambling code identifiers and associated offsets. One of ordinary skill in the art would clearly recognize that the scrambling code identifiers could be stored in a type of memory for further processing. The cited references below disclose storing scrambling code identifiers:

Shiu et al (US 2004/0252656); Lim et al (US 2003/0202541); and Hokao (US 2002/0177458).

Regarding claim 13, Oh teaches that the threshold is variable and it is proportional to the average noise power (Par. 79-84). One of ordinary skill in the art would clearly recognize that as the average noise power increases the time lapsed increases; and since, the threshold value is proportional to the average noise power level; therefore, the threshold value increases. The threshold value increases as the average noise power increases because the noise level reference indicates that the propagation environment is bad. Hirade (US 2002/0015399), in the same field of endeavor, describes this in more details see figures 1-3 and paragraph 24.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 16, 20, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Aikawa (US 2003/0076801).

As to claims 1, 16, 20, and 21, Aikawa teaches a cell search controller that correlates a received signal with a synchronization sequence to produce a first plurality of search results, each search result comprising at least one of an energy indicator or an offset (chip and/or correlation value) see (Par. 52 and 53); and a processor (Fig. 4, means 24) comparing the stored offset (i.e. chips the number of which corresponds to the predetermined time around the maximum correlation detected path) with the search result offset (chip and/or correlation value) and deleting the corresponding search result from the first plurality of search results when the search result offset (chip) is within a predetermined threshold of the stored offset at section 24 (chips the number of which corresponds to the predetermined time around the maximum correlation detected path, Par. 53, 69, and 72).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 3, 12, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aikawa et al.

As to claims 2 and 17, Aikawa teaches a plurality of scrambling code identifiers wherein different scrambling code identifiers correspond to different cells and are associated with offsets (chips) and the stored offsets (threshold) selected therefrom (Fig. 5; Par. 35 and 53). Aikawa does not expressly teach storing scrambling code identifiers and associated offsets. One of ordinary skill in the art would clearly recognize that the scrambling code identifiers could be stored in a type of memory for further processing.

As to claim 3, Aikawa et al teach a cell search controller in a mobile station, which receives a signal from a base station (Pg. 1, Par. 2).

As to claim 12, Aikawa teaches a cell search controller that has a fixed threshold (FIG. 5, Block S14).

Claims 4-6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aikawa et al, and further in view of Papageorngiou et al (US 2004/0100935).

As to claim 4, Aikawa teaches all the subject matters as recited in claim 1, except for the received signal comprising a scrambling code transmitted over a plurality of slots

and a synchronization sequence repeated during each slot. Papageorngiou discloses a received signal comprising a scrambling code transmitted over a plurality of slots and a synchronization sequence repeated during each slot (Pg. 1, Par. 2; Pg. 3, Par. 62). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Papageorngiou with Aikawa in order to establish slot synchronization.

As to claim 5, Aikawa teaches correcting (section 23) the correlation values (search results) prior to multipath deletion (step 24) see (Par. 53).

As to claim 6, Aikawa teaches adjusting the threshold value (stored offset) prior to comparing (Par. 74).

As to claim 14, Aikawa teaches a secondary synchronization sequence detection block 3 wherein the received signal is inputted to block 3 and the secondary synchronization sequence establishes frame timing in which each frame comprises of 15 time slots (0-14) and a unique subset of scrambling codes (Fig. 1, 11, and 12; Par. 3 and 8).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aikawa et al and further in view of Papageorngiou et al, further in view of Mathew et al (US 2004/0161020).

As to claim 15, Aikawa teaches correlating the received signal with the subsequences in accordance with the offset of one of the first plurality of search results to identify the respective secondary synchronization sequence (Fig. 9 and 10, means 101, 102, 103, and 104; Par. 7-9). Aikawa is silent about correlating the received signal with each of the subset of scrambling codes until the correlation value exceeds a

threshold value and generating an indicator to identify the scrambling code transmitted at the offset of the search result of the first plurality of search results. Mathew, in the same field of endeavor, teaches correlating the received signal with each of the subset of scrambling codes until the correlation value exceeds a threshold value and generating an indicator to identify the scrambling code transmitted at the offset of the search result of the first plurality of search results (Fig. 4 and 7-9). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Mathew with Aikawa and Papageorngiou in order to perform scrambling code identification (Pg. 6, Par. 45).

Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aikawa et al, further in view of Mathew et al.

As to claims 7 and 18, Aikawa teaches all the subject matters claimed above, except for the searcher correlates the received signal with a scrambling code over a search window to produce a list search result. Mathew, in the same field of endeavor, teaches a searcher that correlates the received signal with a scrambling code over a search window to produce a list search result (Fig. 7; Pg. 6, Par. 45). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Mathew with Aikawa in order to perform scrambling code identification (Pg. 6, Par. 45).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aikawa et al and Mathew et al, further in view of Papageorngiou et al.

As to claim 19, Aikawa and Mathew teach all the subject matters claimed above, except for obtaining scrambling code groups and slot time of next cell in neighboring list.

Papageorngiou et al teach obtaining scrambling code groups and slot time of next cell in neighboring list (Fig. 2, Block 202). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Papageorngiou et al in order to perform secondary synchronization channel search at the code group (Fig. 2, Block 203).

Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aikawa et al, further in view of Mathew et al and Rick et al (US 2003/0086512).

As to claim 8, Aikawa teaches generating the first and second scrambling groups (Pg. 1, Par. 8 and 9). Aikawa does not expressly teach that the searcher further correlates the received signal with a scrambling code over a searach window to produce a list search result; and the processor further directs the searcher to search a search window around the offset associated with one or more of the first plurality of search results using one or more scrambling codes identified by one or more of the second plurality of scrambling code identifiers, respectively. Mathew, in the same field of endeavor, teaches a searcher that correlates the received signal with a scrambling code over a search window to produce a list search result (Fig. 4 and 7; Pg. 6, Par. 45). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Mathew with Aikawa in order to perform scrambling code identification (Pg. 6, Par. 45). Rick, in the same field of endeavor, teaches performing a search cycle step to search a search window around the offset associated with one or more of the first plurality of search results using one or more scrambling codes identified by one or more of the second plurality of scrambling code identifiers, respectively (Fig. 3A, Blocks 302

and 304; Fig. 5A; Pg. 6, Par. 78-80). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Rick with Aikawa and Mathew in order to perform the search cycle step to estimate one or more parameter(s) of a signal using dynamically variable search window (Pg. 2, Par. 21).

As to claim 9, Mathew teaches that a cell search method, wherein a scrambling code identifier is removed from the plurality of scrambling code identifiers when the list search result exceeds a predetermined threshold (Fig. 4 and 7; Par. 41 and 45-48). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Mathew with Aikawa in order to perform scrambling code identification (Pg. 6, Par. 45-48).

As to claim 10, Mathew teaches that the scrambling code identifiers corresponding to undetected neighbor cells (Fig. 4 and 7, Blocks 411 and 711).

As to claim 11, Mathew teaches that the scrambling code identifiers corresponding to previously identified cells (Fig. 4 and 7, Blocks 409 and 709).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aikawa et al, and further in view of Oh et al.

As to claim 13, Aikawa teaches all the subject matters claimed above, except for the predetermined threshold is variable increasing with an increase in the time lapsed since the associated offset was determined. Oh teaches that the threshold is variable and it is proportional to the average noise power (Par. 79-84). One of ordinary skill in the art would clearly recognize that as the average noise power increases the time lapsed increases; and since, the threshold value is proportional to the average noise

power level; therefore, the threshold value increases. The threshold value increases as the average noise power increases because the noise level reference indicates that the propagation environment is bad.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freshteh N. Aghdam whose telephone number is (571) 272-6037. The examiner can normally be reached on Monday through Friday 9:00-5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Freshteh Aghdam
March 26, 2006

KEVIN BURD
PRIMARY EXAMINER